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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/902,883 | 07/11/2001 | Meichun Ruan | 112624-00158 | 9836 |
| 26707 | 7590 | 09/08/2005 | EXAMINER | |
| QUARLES & BRADY LLP RENAISSANCE ONE TWO NORTH CENTRAL AVENUE PHOENIX, AZ 85004-2391 | | | SONG, SARAH U | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 09/902,883 | Applicant(s) RUAN ET AL. | |
| | Examiner Sarah Song | Art Unit 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-9,14-18 and 25-33 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 30 is/are allowed.
 6) ☐ Claim(s) _____ is/are rejected.
 7) ☒ Claim(s) 1-4,7-9,14-18,25-29 and 31-33 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 18 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's communication filed on June 27, 2005 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are persuasive and the rejections based upon prior art made of record in the previous Office Action are withdrawn. Claims 1-4, 7-9, and 14-18 are amended. Claims 5, 6, 10-13 and 19-24 are canceled. Claims 25-33 are new. Claims 1-4, 7-9, 14-18 and 25-33 are pending.

Claim Objections

2. Claims 1-4, 7-9, 14-18, 25-29 and 31-33 are objected to because of the following informalities:

- regarding claim 1, in line 13, Examiner suggests inserting —of—after “enclosure”; in line 16, Examiner suggests changing “the cantilever operation” to —the reflecting structure— to eliminate the lack of antecedent basis for “the cantilever operation”;
- regarding claim 8, Examiner suggests changing “the channel has” to —the plurality of channels each have”;
- regarding claim 14, in line 15, Examiner suggests inserting —of—after “enclosure”; in line 18, Examiner suggests changing “the cantilever operation” to —the reflecting structure— to eliminate the lack of antecedent basis for “the cantilever operation”;
- regarding claim 25, spanning lines 9 and 10, Examiner suggests changing “the cantilever operation” to —the mirror—; spanning lines 10 and 11, Examiner suggests changing “the reflecting structure” to —the mirror—; and in line 11, Examiner suggests changing “the” to —a— to eliminate the lack of antecedent basis;

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- regarding claims 31-33, Examiner suggests changing “the first position” and “the second position” to –a first position—and –a second position—respectively to eliminate the lack of antecedent basis.

The dependent claims inherit the objections of the claims from which they depend. Appropriate correction is required.

Allowable Subject Matter

3. Claim 30 is allowed.
4. Claims 1-4, 7-9, 14-18, 25-29 and 31-33 are objected to as noted above, but would be allowable if rewritten to overcome the objections.
5. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an optical transmission system comprising a substrate including a channel enclosed by a wall in combination with a cantilevered reflecting structure/mirror formed within the wall of the channel, wherein the cantilevered reflecting structure rotates outward away from the channel and receives the optical signal. Athale discloses a reflecting structure that rotates inward to receive an optical signal, but fails to suggest a reflecting structure that rotates outward away from the channel to receive an optical signal. The prior art in general teaches reflecting structures that rotate inward toward a channel of a substrate in order to receive an optical signal. Therefore, one of ordinary skill in the art would not have been motivated to provide a reflecting structure that rotates outward away from the channel of a substrate to receive an optical signal without undue hindsight.

Conclusion

6. Applicant's amendment necessitated the objection(s) presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sarah Song
Patent Examiner
Group Art Unit 2874